

STATE OF SOUTH CAROLINA

(Caption of Case)

In re:

Application of Duke Energy Carolinas, LLC  
For Approval of Energy Efficiency Plan,  
Including an Energy Efficiency Rider and  
Portfolio of Energy Efficiency Programs

BEFORE THE  
PUBLIC SERVICE COMMISSION  
OF SOUTH CAROLINA

COVER SHEET

DOCKET

NUMBER: 2007 - 358 - E

(Please type or print)

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**DOCKETING INFORMATION** (Check all that apply)

☐ Emergency Relief demanded in petition ☐ Request for item to be placed on Commission's Agenda expeditiously

☐ Other: \_\_\_\_\_

| INDUSTRY (Check one)                                 | NATURE OF ACTION (Check all that apply)            |  |  |
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| <input checked="" type="checkbox"/> Electric         | <input type="checkbox"/> Affidavit                 | <input type="checkbox"/> Letter                            | <input type="checkbox"/> Request                   |
| <input type="checkbox"/> Electric/Gas                | <input type="checkbox"/> Agreement                 | <input type="checkbox"/> Memorandum                        | <input type="checkbox"/> Request for Certification |
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| <input type="checkbox"/> Electric/Water              | <input type="checkbox"/> Appellate Review          | <input type="checkbox"/> Objection                         | <input type="checkbox"/> Resale Agreement          |
| <input type="checkbox"/> Electric/Water/Telecom.     | <input type="checkbox"/> Application               | <input type="checkbox"/> Petition                          | <input type="checkbox"/> Resale Amendment          |
| <input type="checkbox"/> Electric/Water/Sewer        | <input checked="" type="checkbox"/> Brief          | <input type="checkbox"/> Petition for Reconsideration      | <input type="checkbox"/> Reservation Letter        |
| <input type="checkbox"/> Gas                         | <input type="checkbox"/> Certificate               | <input type="checkbox"/> Petition for Rulemaking           | <input type="checkbox"/> Response                  |
| <input type="checkbox"/> Railroad                    | <input type="checkbox"/> Comments                  | <input type="checkbox"/> Petition for Rule to Show Cause   | <input type="checkbox"/> Response to Discovery     |
| <input type="checkbox"/> Sewer                       | <input type="checkbox"/> Complaint                 | <input type="checkbox"/> Petition to Intervene             | <input type="checkbox"/> Return to Petition        |
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| <input type="checkbox"/> Transportation              | <input type="checkbox"/> Discovery                 | <input type="checkbox"/> Prefiled Testimony                | <input type="checkbox"/> Subpoena                  |
| <input type="checkbox"/> Water                       | <input type="checkbox"/> Exhibit                   | <input type="checkbox"/> Promotion                         | <input type="checkbox"/> Tariff                    |
| <input type="checkbox"/> Water/Sewer                 | <input type="checkbox"/> Expedited Consideration   | <input type="checkbox"/> Proposed Order                    | <input type="checkbox"/> Other:                    |
| <input type="checkbox"/> Administrative Matter       | <input type="checkbox"/> Interconnection Agreement | <input type="checkbox"/> Protest                           |  |
| <input type="checkbox"/> Other:                      | <input type="checkbox"/> Interconnection Amendment | <input type="checkbox"/> Publisher's Affidavit             |  |
|  | <input type="checkbox"/> Late-Filed Exhibit        | <input type="checkbox"/> Report                            |  |

**BEFORE**  
**THE PUBLIC SERVICE COMMISSION OF**  
**SOUTH CAROLINA**  
**DOCKET NO. 2007-358-E**

|   |   |                                   |
|---|---|-----------------------------------|
| In re:                                    | ) |                                   |
|   | ) |                                   |
| Application of Duke Energy Carolinas, LLC | ) | <b>BRIEF OF DUKE ENERGY</b>       |
| For Approval of Energy Efficiency Plan,   | ) | <b>CAROLINAS WITH</b>             |
| Including an Energy Efficiency Rider and  | ) | <b>CONCURRENCE OF ORS IN</b>      |
| Portfolio of Energy Efficiency Programs   | ) | <b>SUPPORT OF APPLICATION FOR</b> |
|   | ) | <b>APPROVAL OF ENERGY</b>         |
|   | ) | <b>EFFICIENCY PLAN AND</b>        |
|   | ) | <b>APPROVAL OF SETTLEMENTS</b>    |
|   | ) |                                   |

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Duke Energy Carolinas, LLC (“Duke Energy Carolinas” or the “Company”) submits to the Public Service Commission of South Carolina (the “Commission”) its Brief in Support of its Application for Approval of Energy Efficiency Plan, Including an Energy Efficiency Rider and Portfolio of Energy Efficiency Programs (the “Application”) filed with the Commission on September 28, 2007, and in support of the settlement agreements reached in the case. The South Carolina Office of Regulatory Staff (the “ORS”) concurs with the position set forth in this brief and supports the approval and implementation of the Duke Energy Carolinas’ Energy Efficiency Plan as modified by the settlement agreements.

The Application consists of three inter-related components: (i) a new regulatory approach to energy efficiency and demand response programs<sup>1</sup>; (ii) an energy efficiency rider, Rider EE (SC), to implement the approach for Company-sponsored energy efficiency programs; and (iii) a portfolio of energy efficiency programs. The new regulatory approach, the energy efficiency rider, and the portfolio of energy efficiency programs collectively are referred to as the Energy Efficiency Plan.

The first settlement agreement reached in this case is an agreement among the ORS, Duke Energy Carolinas, the South Carolina Energy Users Committee (“SCEUC”), and Wal-Mart Stores East, LP (“Wal-Mart”) that was filed on January 29, 2008 (hereinafter, the “Settlement Agreement”).

A second settlement agreement among the ORS, Duke Energy Carolinas, and Piedmont Natural Gas Company, Incorporated (“Piedmont”) was filed on February 1, 2008 (the “Piedmont Settlement Agreement”) resolving issues relating to the Company’s

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<sup>1</sup> Consistent with its other filings in this docket, Duke Energy Carolinas uses the term “energy efficiency” herein to mean both demand response measures and energy conservation measures.

proposed energy efficiency rider. Specifically, Piedmont withdrew its opposition to approval by the Commission of Duke Energy Carolinas' Energy Efficiency Plan, as amended by the Settlement Agreement, subject to Piedmont's right to oppose subsequent individual program tariff filings and the parties' commitment to work together over a period of four months to resolve issues relating to the Company's proposed programs. Thereafter, on July 11, 2008, the ORS, the Company, and Piedmont filed an Explanatory Brief and Joint Motion for Approval of Amended Settlement and Adoption of Amended Settlement Agreement (the "Amended Piedmont Settlement Agreement"), which resolved all issues among Piedmont, Duke Energy Carolinas, and ORS in this docket.

The Settlement Agreement, the Piedmont Settlement Agreement, and the Amended Piedmont Settlement Agreement collectively are referred to as the "Settlement Agreements." The only parties to the proceeding that were not parties to one of the Settlement Agreements are Southern Environmental Law Center, Southern Alliance for Clean Energy, Coastal Conservation League, and Environmental Defense (collectively, the "Environmental Intervenors").

As demonstrated below, the Company's Application and the Settlement Agreements are in the public interest and meet the requirements of South Carolina law and the Commission's rules, and thus should be approved.

## **I. INTRODUCTION**

For over one hundred years, Duke Energy Carolinas and its predecessors have served customers in South Carolina by "manufacturing" electricity in power generating facilities and selling that electricity. The Company's principal goal has been to provide its customers access to electric power, and to have that power available on a reliable and

cost-effective basis. Working towards the goal of universal access to electricity, the Company and its shareholders built plants and strung thousands of miles of wire to ensure that all people in its service territory would have access to electricity – one of the greatest accomplishments of the 20<sup>th</sup> Century.

Today, the nation faces additional challenges. In the 21<sup>st</sup> century, energy policy on the national, state, and local levels must emphasize not only access to energy but also access to energy efficiency in order to reap the national security and environmental benefits resulting from reduced demand for and generation of energy. The parties to this proceeding generally agree that greater energy efficiency is a public good that must be fostered and encouraged. The South Carolina Energy Conservation and Efficiency Act of 1992 (“S.C. Energy Efficiency Act”) expressly made promotion of energy efficiency, as well as renewable energy, an important component of state energy policy. S.C. Code Ann. §§ 48-52-210 & 58-37-20 (Supp. 2007).

The benefits of increased energy efficiency are well known and energy efficiency as a goal has been pursued (with varying degrees of success) in many parts of the country for years. Yet, as Jane Sadowsky, an investment banking expert focused upon the power and energy sectors, testified (and her testimony on this point is uncontradicted), the reality is that even today energy efficiency programs do not make a material contribution to investor-owned utilities’ resource portfolios in the United States. (Tr. Vol. 1, p. 104). Indeed, investor-owned utilities have a built-in disincentive to pursue aggressive efficiency programs, because they typically make money by selling *more* electricity, not by inducing their customers to purchase *less* electricity. (Tr. Vol. 1, p. 104-105 & 189).

The “save-a-watt” regulatory model included in the Company’s Energy Efficiency Plan seeks to change that paradigm. Save-a-watt is a ratemaking model with a compensation formula that places a value, and therefore a price, upon energy efficiency. This price creates an incentive for the utility to pursue energy efficiency in a deliberate and sustained manner by allowing the utility an opportunity to earn a return on, and develop revenues from, successful energy efficiency programs. Under the save-a-watt compensation mechanism (as modified by the Settlement Agreement), the Company would be paid 85% of the avoided costs created by program implementation – that is, 85% of the costs customers otherwise would have to pay for the capacity and energy generated if the programs were not implemented and, therefore, energy efficiency savings were not realized. In effect, save-a-watt creates a new business for the Company, a business in which it does not manufacture and sell energy, but rather provides a service to its customers – a service geared towards inducing its customers to use (and therefore buy) less energy.

Any business operation, new or old, carries with it risk. With the save-a-watt model, the risk that the Company will not achieve sufficient energy efficiency savings, or that the savings achieved will cost more than planned, falls upon Duke Energy Carolinas, not its customers. First, the Company receives (and, more to the point, retains) the 85% of avoided cost payment if – and *only* if – it produces energy savings through its programs; and whether the programs produce savings and the amount of those savings will be independently verified and measured. The Company is paid *only* for measured and verified results. No other proposal provides as meaningful and fundamental an incentive to produce those results as the save-a-watt approach.

Second, the 85% of avoided cost payment is all that the customers ever pay. If actual program costs exceed Duke Energy Carolinas' projections (or even exceed 85% of the avoided generation costs), then the Company is responsible for the shortfall. The risk of cost overruns is an appreciable risk. Further, the financial risk assumed by Duke Energy Carolinas also includes the risk that participation in the energy efficiency programs will not meet Company projections. The risk is exacerbated in South Carolina, generally, and the Company's service territory, in particular, because of its comparatively low electricity rates, which will make it more difficult for Duke Energy Carolinas to attract participants to its energy efficiency programs. But under save-a-watt, the risk that energy efficiency programs will fail to achieve success is borne entirely by the Company. The save-a-watt approach is a least risk method for customers.

In the final analysis, no matter what the actual programs cost, what is undeniably true is that the cost to customers is going to be lower than the alternative of building new generation to produce the energy saved by the Company's Energy Efficiency Plan, because 85% of some number is always lower than 100% of that same number. The Company's customers therefore are guaranteed a savings over the otherwise applicable price they would pay for power generation.

New ideas often need time to gain acceptance, and the Company's Energy Efficiency Plan has had its critics. The Environmental Intervenors assert that the Company's plan is too rich, *i.e.*, that it provides the Company with too much compensation and that the plan's proposed goals are too modest. However, the Energy Efficiency Plan, as modified by the Settlement Agreements, has a number of key features that make it superior to alternative compensation models:



- Save-a-watt creates not only value for customers, but also an appropriate incentive to the Company in pursuing energy efficiency. Moreover, it provides an incentive that avoids many of the difficulties inherent in traditional cost-plus models, such as the manner in which to best measure and allow the utility to recover lost margins<sup>2</sup>. In this way, save-a-watt creates the opportunity for a win-win result with a much reduced regulatory and administrative superstructure.<sup>3</sup>
- Save-a-watt aligns risk and rewards by allowing the Company to make the investments in energy efficiency up front and to assume the risk that the program will work – *i.e.*, that it can successfully implement programs, enroll customers, and produce actual energy and demand savings. The Company is compensated only for actual, verified energy and demand savings. This is in marked contrast to cost-plus models, in which customers may pay for both the costs of programs that do not succeed and the cost of power purchased or generated as a result of program failure.
- Pursuant to the Settlement Agreement, the Company will offset the rate increase associated with Rider EE (SC) with over-collections from its Demand Side Management deferred balance account (the “DSM Balance”) until either the balance is zero or the Company’s next base rate case, whichever occurs first.

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<sup>2</sup> Lost margins are defined as lost revenues net of fuel and variable operations and maintenance expenses.

<sup>3</sup> A reduced superstructure does not mean, of course, that there will be reduced oversight by this Commission and the ORS. To the contrary, save-a-watt as proposed is completely transparent. The Company’s quarterly reporting to the Commission will detail costs (including specific program costs, which will be footnoted), results, and earnings. Furthermore, after the initial two-year review the Commission and the ORS will review annually the Company’s energy efficiency results, revenues, and recovery to adjust Rider EE (SC). Thus, the Commission will have the information necessary to allow it to exercise its oversight authority and make changes it deems appropriate.

Pursuant to the Settlement, the DSM Balance will be used to implement a rate decrement for Residential, General Service, and Lighting customers equal to the increment resulting from the difference between the current DSM collection in rates and the demand response and conservation factors comprising the annual Rider EE (SC) rate. For industrial customers, the DSM Balance will be used to implement a rate decrement equal to the demand response and conservation factors comprising the annual Rider EE (SC) rate increment.

- The Settlement Agreement also proposes a two year review period that will allow the Company, intervenors, the ORS, and the Commission an early opportunity to review the operation of the plan.

Duke Energy Carolinas' Energy Efficiency Plan thus fulfills the policy imperatives of the S.C. Energy Efficiency Act. It allows the Company and its customers the opportunity to realize the economic benefits of energy efficiency. It also allows our State and this nation the opportunity to realize the environmental and national security benefits of energy efficiency. Accordingly, the Commission should approve the Company's Application and permit the implementation of the save-a-watt model, as well as Rider EE (SC) and the energy efficiency programs that the Company has proposed.

## **II. APPROVAL OF SAVE-A-WATT MODEL**

As previously stated, the Company's Application consists of three inter-related components: (i) the save-a-watt regulatory approach to energy efficiency and demand response programs; (ii) an energy efficiency rider, Rider EE (SC), to implement the approach for Company-sponsored energy efficiency programs; and (iii) a portfolio of

energy efficiency programs. The S.C. Energy Efficiency Act provides the framework for approval of all three components of the Company's Application.

The specific programs that make up the Company's proposed portfolio have encountered no serious opposition, although the Environmental Intervenors would vary the mix of programs to include more conservation programs. The program mix is something that can be dealt with through the collaborative process the Company employed in order to fashion the portfolio of programs currently proposed, and which will be employed to assess additional programs going forward. Indeed, the Environmental Intervenors have neither indicated any disagreement with the Company's forecast of program costs, nor asserted that those costs are unreasonable or imprudent. The Environmental Intervenors also have not presented to the Commission any specific alternative energy efficiency regulatory model or programs.

Rather, the focal points of the dispute in this proceeding have been on the revenue side – that is, the question of whether the revenues derived from the save-a-watt approach are too high, and whether the Energy Efficiency Plan's proposed goals are too modest. In this section of its brief, the Company:

- Demonstrates that its Energy Efficiency Plan is consistent with the public policy outlined in the S.C. Energy Efficiency Act.
- Demonstrates that its Energy Efficiency Plan is in the public interest.
- Demonstrates that the major criticisms leveled against its Energy Efficiency Plan – essentially, that it is too expensive and that it does not achieve enough energy efficiency savings – are unfounded.

Under these circumstances, the Commission should approve Duke Energy Carolinas' Application, as modified by the Settlement Agreements, including the save-a-watt compensation model, Rider EE (SC), and the portfolio of energy efficiency programs proposed by the Company.

**A. The save-a-watt approach is consistent with the public policy outlined in the S.C. Energy Efficiency Act.**

When the South Carolina General Assembly adopted the S.C. Energy Efficiency Act it declared that the policy of this State is to have a "comprehensive state energy plan that maximizes to the extent practical environmental quality and energy conservation and efficiency...." S.C. Code Ann. § 48-52-210 (Supp. 2007). Part of the S.C. Energy Efficiency Act enables the Commission to adopt procedures to encourage electrical utilities to invest in cost-effective energy efficient technologies and energy conservation programs. S.C. Code Ann. § 58-37-20 (Supp. 2007).

These procedures must provide incentives and cost recovery for energy suppliers who invest in energy supply and end-use technologies that are cost effective, environmentally acceptable, and reduce energy consumption or demand. S.C. Code Ann. § 58-37-20 (Supp. 2007). Energy efficiency is a "zero emissions" component of Duke Energy Carolinas' resource portfolio. The most environmentally sound, cost-effective, and reliable kilowatt of electricity is the one that the Company does not have to generate. (Tr. Vol. 1, p. 187-188). The Company's Energy Efficiency Plan proposes to implement a comprehensive set of cost-effective energy efficiency programs at a cost to customers of 85% of the avoided supply-side costs. The Company only would be paid for the actual demand and energy reduction impacts achieved. (Tr. Vol. 1, p. 194).

Under the S.C. Energy Efficiency Act, procedures adopted by the Commission to encourage energy efficiency must allow energy suppliers to recover costs and to obtain a reasonable rate of return on their investment in qualified demand-side management programs that are at least as financially attractive as construction of new facilities. S.C. Code Ann. § 58-37-20 (Supp. 2007).<sup>4</sup> Duke Energy Carolinas' Energy Efficiency Plan is designed to produce energy and demand savings to help meet the Company's load obligations at an overall cost and environmental impact that are lower to customers than comparable supply-side investments. Customers only pay for results, *i.e.*, energy efficiency savings achieved by the Company and verified by a third party (Tr. Vol. 1, p. 123-124).

Pursuant to the S.C. Energy Efficiency Act, the procedures must establish rates and charges that ensure that the net income after implementation of specific cost-effective energy conservation measures is at least as high as it would have been if the measures had not been implemented. S.C. Code Ann. § 58-37-20 (Supp. 2007). The save-a-watt approach encourages all cost-effective energy efficiency at a cost to customers that is

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<sup>4</sup> S.C. Code Ann. § 58-37-20 (Supp. 2007) provides that:

The South Carolina Public Service Commission may adopt procedures that encourage electrical utilities and public utilities providing gas services subject to the jurisdiction of the commission to invest in cost-effective energy efficient technologies and energy conservation programs. If adopted, these procedures must: provide incentives and cost recovery for energy suppliers and distributors who invest in energy supply and end-use technologies that are cost-effective, environmentally acceptable, and reduce energy consumption or demand; allow energy suppliers and distributors to recover costs and obtain a reasonable rate of return on their investment in qualified demand-side management programs sufficient to make these programs at least as financially attractive as construction of new generating facilities; *require the Public Service Commission to establish rates and charges that ensure that the net income of an electrical or gas utility regulated by the commission after implementation of specific cost-effective energy conservation measures is at least as high as the net income would have been if the energy conservation measures had not been implemented.* For purposes of this section only, the term "demand-side activity" means a program conducted by an electrical utility or public utility providing gas services for the reduction or more efficient use of energy requirements of the utility or its customers including, but not limited to, utility transmission and distribution system efficiency, customer conservation and efficiency, load management, cogeneration and renewable energy technologies. (Emphasis added).

lower than supply-side alternatives and provides the Company with an opportunity to achieve comparable growth in earnings. (Tr. Vol. 1, p. 194-195).

**B. The concept of value-of-service pricing is firmly based in and consistent with South Carolina law.**

The save-a-watt model is creative and innovative, while at the same time remaining consistent with recognized South Carolina regulatory principles. It relies upon avoided cost pricing set by this Commission under the Public Utility Regulatory Policy Act of 1978 ("PURPA"). As such, save-a-watt is not fundamentally different from cost-of-service ratemaking, in that the cost of the avoided supply-side resources form the basis for the ratemaking. At the same time, the model recognizes the value of the energy efficiency services that will be provided to customers, and is thus consistent with the longstanding concept of value-of-service ratemaking. (Tr. Vol. 1, p. 351).

As discussed above, the Commission has broad authority pursuant to the S.C. Energy Efficiency Act to allow energy suppliers to recover costs and obtain a reasonable rate of return on their investment. In addition, S.C. Code Ann. § 58-27-840 recognizes value-of-service pricing as an appropriate consideration by the Commission in establishing classifications. It provides that:

No electrical utility...shall, as to rates or services, make or grant any unreasonable preference or advantage to any person, corporation, municipality or consolidated political subdivision to its unreasonable prejudice or disadvantage. No electrical utility, distribution electric cooperative or consolidated political subdivision shall establish or maintain any unreasonable difference as to rates or service as between localities or as between classes of service. Subject to the approval of the Commission, however, electrical utilities...may establish classifications of rates and services and such classifications may take into account the conditions and circumstances surrounding the service, such as the time when used, the purpose for which used, the demand upon plant facilities, the value of the service rendered and any other reasonable consideration. The Commission may determine any question of fact arising under this

section. The Commission shall not fix any rates charged by electric cooperatives or consolidated political subdivisions.

S.C. Code Ann. § 58-27-840 (1976).

The Commission has a history of dealing with the relative merits of cost of service and value of service in rate proceedings involving telephone utilities and gas companies. The statutes governing telephone utilities contain a provision, S.C. Code Ann. § 58-9-250, which mirrors the electric utility counterpart cited above — S.C. Code Ann. § 58-27-840. Many of the Commission's orders in the 1970s and 1980s applied the principles of value-of-service pricing for ratemaking purposes in telephone ratemaking proceedings. In these cases the Commission indicated that particular cost studies should not be the exclusive determinant for pricing telecommunications services. *In re: Application of General Telephone Co. for an Adjustment in Rates for Intrastate Telephone Service*, Docket No. 18,269, Order No. 19,978 p. 23 & 27 (local tariffs were determined on a "value of service concept."); *In re: Application of Southern Bell Telephone and Telegraph Co. to Change Certain of its Rates and Charges*, Docket No. 78-353-C, Order No. 79-90, p. 48-49; *In re: Application of Southern Bell Telephone and Telegraph Co. to Change Certain of its Intrastate Rates and Charges*, Docket No. 79-305-C, Order No. 80-113, p. 66; *In re: Application of General Telephone Co. to Change Certain of its Intrastate Rates and Charges*, Docket No. 81-121-C, Order No. 81-721, p. 39; *In re: Application of General Telephone Co. to Change Certain of its Intrastate Rates and Charges*, Docket No. 84-390-C, Order No. 85-200, p. 35; *In re: Application of GTE South, Inc. for an Adjustment in Rates for Intrastate Telephone Service*, Docket No. 90-698-C, Order No. 91-412, p. 61.

The Commission also approved the value-of-service methodology in the context of setting gas rates for industrial customers in a South Carolina Pipeline proceeding. *In re: Application of S.C. Pipeline Corp. for a Rate Reduction and Adjustments in its Gas Rate Schedules and Tariffs*, Docket No. 90-204-G, Order No. 90-729 (“S.C. Pipeline Order No. 90-729”) and *In re: Application of S.C. Pipeline Corp.- Maximum Rates for Industrial Customers*, Docket No. 90-588-G, Order No. 95-1717 (S.C. Pipeline Order No. 95-1717). SCEUC challenged the value-of-service methodology used in setting industrial rates. SCEUC argued that the Commission was under a mandate to set rates for all natural gas companies using a cost-of-service methodology. The Commission held that the cost-of-service ratemaking methodology is not the only ratemaking methodology available to the Commission. *S.C. Pipeline* Order No. 90-729, p. 26-28 & Order No. 95-1717, p. 1.

Approval of the Company’s Energy Efficiency Plan is also within the Commission’s broad statutory ratemaking authority. *E.g.*, S.C. Code Ann. §58-3-140(A) (“The Public Service Commission is vested with power and jurisdiction to supervise and regulate the rates and service of every public utility in this state.”). Further, the South Carolina courts have generally interpreted the ratemaking statutes as giving the Commission considerable latitude in the exercise of its ratemaking authority. *See, e.g., Nucor Steel, a Division of Nucor Corporation v. South Carolina Public Service Commission*, 312 S.C. 79, 85, 439 S.E. 2d 270, 273 (1994).

In summary, the Commission has a history of considering value-of-service considerations when it establishes rates. This precedent combined with the Commission’s broad statutory authority under S.C. Code Ann. § 58-27-840 (Supp. 2007), S.C. Code Ann. §58-3-140(A), and S.C. Code Ann. § 58-37-20 (Supp. 2007) clearly



establish the Commission's legal authority to approve Duke Energy Carolinas' Energy Efficiency Plan, including its save-a-watt compensation model.

**C. The Company's Energy Efficiency Plan is in the public interest.**

The Company has demonstrated in this and other proceedings<sup>5</sup> that, starting in 2009, a combination of additional base load, intermediate, and peaking generation; renewable resources; and energy efficiency programs is required over the next twenty years to meet customer demand reliably and cost-effectively in South Carolina. New generation required to meet increasing customer demand necessarily will place upward pressure on electricity rates. The Company's Energy Efficiency Plan offers the Company and its customers the opportunity to achieve energy efficiency at a 15% discount off the cost of traditional generation, and at a significantly greater discount off the cost of renewable generation. Thus, save-a-watt results in lower costs to customers than they would experience if Duke Energy Carolinas built new generation. In addition, customers will have the opportunity to lower their electric bills further by participating in the Company's energy efficiency programs. Finally, customers will pay only for results, *i.e.*, energy efficiency savings achieved by the Company as measured and verified by a third party. Accordingly, from a comparative cost perspective alone, the Company's Energy Efficiency Plan clearly furthers the public interest.

Of course, cost saving by customers – although very important – is not the only benefit bestowed by energy efficiency. Implementation of efficiency programs also will result in reduced environmental impact because kilowatt hours not generated as a consequence of the Energy Efficiency Plan can be included as a “zero emissions” component of the Company's resource portfolio. In addition, energy efficiency promotes

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<sup>5</sup> See, *e.g.*, Docket Nos. 2005-356-E and 2007-440-E.

energy security, and a kilowatt saved through implementation of the Energy Efficiency Plan is a kilowatt that is not at risk from supply interruption or other national security threats.

To be sure, no party to this proceeding doubts that energy efficiency is intrinsically in the public interest and an objective worthy of pursuit. What the Company is proposing in this proceeding is a new regulatory structure that will allow the Company to achieve sustained energy efficiency results. Although many other efforts – even vigorously pursued efforts – in the past have fallen short of realizing energy efficiency’s potential, Duke Energy Carolinas believes its pay-for-performance save-a-watt model is designed to succeed because it more appropriately aligns the utility’s performance risk with its potential financial reward. For example, California has the largest energy efficiency program in the country, but it falls short of the estimated potential. California, while having the highest estimated energy efficiency demand savings at 8%, is still only at one-third the estimated national potential. (Tr. Vol. 1, p. 47). Nationally, as Company Witness Judah Rose testified, “Even after more than two decades of Integrated Resource Planning (“IRP”) and other attempts to increase customer-funded energy efficiency, there is evidence that U.S. electric utilities can further decrease the total costs of service by increasing the amount of customer-funded energy efficiency.” (Tr. Vol. 1, p. 44). Quantifying the gap between potential and achievement, Rose found that although national estimates indicate approximately 24% savings potential, energy efficiency only decreases electricity demand by about 2%. In other words, as a nation we could be doing 12 times better than we are, despite two decades worth of effort. (Tr. Vol. 1, p. 45).

The energy efficiency efforts over these past decades have not directly linked

reward, risk, and achievement. The save-a-watt model, on the other hand, aligns reward with both risk and achievement by allowing the Company to be paid only if it produces results and by placing the risk of non-performance upon the Company, not the customer. This structure gives save-a-watt the opportunity to achieve and maintain on a sustained basis energy efficiency success. As Company Witness Dr. Charles Cicchetti, an economics professor, former state utilities regulator, and highly experienced economic and financial consultant with particular expertise in energy and environmental regulation puts it:

I conclude that Duke Energy Carolinas' energy efficiency proposal has been designed to actually succeed where past efforts have largely failed to sustain after public support wanes. The plan's seminal breakthrough is to allow the utility to earn money from a utility service that helps Duke Energy Carolinas' customers reduce energy use. This makes energy efficiency both an input, and a resource, and a new profit regulated service that would, if encouraged, become a core utility business. This is a paradigm shift that creates a new hybrid regulatory business model that, I believe, will sustain energy efficiency efforts. . . . The Company's approach helps Duke Energy Carolinas and its retail customers to find a profitable balance between electricity (KWH) and economic efficiency. The Company does this in a manner that levels the playing field for conservation earnings, making aggressive pursuit of energy efficiency programs a sustainable and growing reality for states with low cost electricity, like South Carolina.

(Tr. Vol. 2, p. 895-896). Cicchetti indicates further that the "[s]ave-a-[w]att approach has the potential to become a national model to incentivize utilities to expand energy efficiency aggressively in both traditionally regulated and restructured markets." (Tr. Vol. 2, p. 895).

The save-a-watt approach puts energy efficiency on a level playing field with supply side-options, thereby creating a business model that provides incentives for the Company to pursue all cost-effective energy efficiency programs. This, in turn, provides

Duke Energy Carolinas with greater potential to realize sustained program success. Accordingly, the Company's Energy Efficiency Plan is very much in the public interest.

**D. The major criticisms of the proposed Energy Efficiency Plan – essentially, that it is too expensive and that it does not achieve enough energy efficiency savings – are unfounded.**

Duke Energy Carolinas' pioneering save-a-watt compensation model has been a target of criticism by the Environmental Intervenors in this docket. First, the Environmental Intervenors complain that the Company's Energy Efficiency Plan will both cost too much for customers and earn too much for the Company. Second, they complain that the plan will achieve too little in the way of energy savings. Neither criticism is valid.

**1. Cost to Customers and the Company's earnings.**

With respect to costs and earnings, several witnesses for the Environmental Intervenors testified that the Company would earn too much under the save-a-watt approach. The Environmental Intervenors' argument that the Company's Energy Efficiency Plan is too rich is based on several flawed analyses. Environmental Intervenors Witnesses Knapp and Atkins contended that the rate of return (cost of capital) sought by the Company was excessive in comparison to that earned by other utilities. (Tr. Vol. 1, p. 488 & 856). However, Company Witness Farmer pointed out that Mr. Atkins' calculation was based on a comparison of the pre-tax weighted average cost of capital used (13.68%) to the after-tax rate of return (10.35%) resulting in a flawed analysis of whether or not the cost of capital was reasonable. (Tr. Vol. 1, p. 560-561). Mr. Farmer explained that Mr. Atkins mistakenly compared a before-tax rate of return with an after-tax rate of return which caused Mr. Atkins to improperly conclude that Duke Energy

Carolinas had inflated the value of avoided capacity and energy costs applicable to the Company's demand response programs. These calculations also led Mr. Atkins to the erroneous conclusion that Duke Energy Carolinas inflated the level of first-year jurisdictional revenues. (Tr. Vol. 2, p. 557-561).

Environmental Intervenors Witness Wilson's testimony also contained mistakes. Mr. Wilson erroneously concludes that the Company would be compensated for 190% of the avoided costs. Duke Energy Carolinas' Witness Dr. Stevie corrected the mathematical error in Mr. Wilson's equations to show that the savings from the programs match the Company's calculations. Dr. Stevie explained that Mr. Wilson's equation calculated the earnings to the Company by taking 90 percent of the avoided cost, subtracting what the Company incurs for costs to implement the program, and subtracting the net lost margins. Mr. Wilson then added in again the total avoided capacity costs of the plants that Duke Energy Carolinas is not building and called the resulting number the Company's earnings. As Dr. Stevie testified, this simply does not make sense. When the last avoided capacity cost component of Mr. Wilson's equation is removed, the calculation results in earnings consistent with the Company's calculations. (Tr. Vol. 1, p. 412-413).

The Environmental Intervenors' mathematical analyses of the save-a-watt model contained numerous errors. As a result, the analyses simply are not credible, and the Commission should heavily discount them. With customer costs within bounds, and no dispute as to projected program costs themselves, it stands to reason that the Company's program earnings will also be within bounds – particularly because those earnings are entirely dependent upon the Company's own efforts to attract customers, and the Company's own ability to keep program costs from ballooning out of control. As the

Company has indicated repeatedly – and the Environmental Intervenors do not dispute – Duke Energy Carolinas has the opportunity, but not a guarantee, to earn a return on its save-a-watt investment.

The truth is that Duke Energy Carolinas' earnings are neither exorbitant nor assured; such earnings are, in fact, completely at risk based upon the success of the programs (*i.e.*, the value provided to customers). Indeed, what is different about the save-a-watt model is its potential for success, not its cost. In contrast to the assertions of Environmental Intervenors Witnesses Gilligan and Wilson, it is precisely the alignment of risk and reward that will ensure the sustainability of the save-a-watt model. (Tr. Vol. 2, p.428-429; Tr. Vol. 2, p. 793). Environmental Intervenors Witness Wilson suggests that the Company's earnings under its Energy Efficiency Plan make it not "sustainable" and "would ultimately lead to a backlash against Save-a-Watt in particular and energy efficiency in general." (Tr. Vol. 2, p.793). The Company believes just the opposite is true. Duke Energy Carolinas submits that the save-a-watt model is more sustainable than the failed cost-plus based regulatory models advocated by the Environmental Intervenors because it is focused on providing value to customers. As previously stated, Duke Energy Carolinas' energy efficiency proposal has been designed to actually succeed where past efforts have largely failed to sustain after public support fades. (Tr. Vol. 2, p. 895). In highlighting the advantages of the save-a-watt model over traditional cost-plus regulation for pricing energy efficiency, Dr. Cicchetti testified:

This is where save-a-watt gets it right. This plan aligns the consumer benefits along with strong shareholder support and incentives to utilize value of service principles to expand energy efficiency onto cost-of-service regulation using integrated resource planning, avoided cost, regulated revenue requirements and rate riders. These combine into a

balanced and transparent regulatory approach that was designed to help Duke Energy Carolinas and its customers leap ahead of the pack and make save-a-watt *succeed, flourish, and be sustained* after public interest wanes.

(Tr. Vol. 2, p. 898) (Emphasis added).

The Energy Efficiency Plan's seminal breakthrough is to allow the utility to earn money from a new utility service that helps its customers reduce energy use. The Company's approach helps Duke Energy Carolinas and its retail customers to find a profitable balance between electricity (kWh) and economic efficiency. (Tr. Vol. 2, p. 895-897).

The Company's efforts to help customers reduce their energy usage is also consistent with Duke Energy Carolinas' least cost planning obligations in its Annual Integrated Resource Plan ("IRP"). The IRP is developed with the objective of meeting customers' needs for a highly reliable energy supply at the lowest reasonable cost. (Tr. Vol. 2, p. 636). The 2007 IRP analysis indicated that the resource portfolios including the programs filed as part of the Company's Energy Efficiency Plan are lower cost to customers than alternative portfolios that do not include the proposed energy efficiency programs. The Company projects that the impact of the energy efficiency programs will create value for customers by offsetting the need for generating resources that would have been required to meet customer needs. (Tr. Vol. 2, p. 642-643).<sup>6</sup>

Notwithstanding the enhanced value provided to customers under the save-a-watt approach, Environmental Intervenors Witness Nichols testified that any rate proposed that does not base utility cost recovery upon the costs actually incurred by the utility is fundamentally flawed. Mr. Nichols advocates shareholder incentives based on

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<sup>6</sup> Duke Energy Carolinas projects that energy efficiency will offset the need for generating resources by providing approximately 1805 MWs of capacity and over 2,000,000 MWHs of energy. (Tr. Vol. 2, p. 643).

performance that include some upper limit to protect customers. The upper limit prevents the total cost of conservation to customers, including any incentive, from deviating excessively from the utility's actual incurred costs. Because there is no limit contained in the Company's plan, Mr. Nichols contends that Duke Energy Carolinas' Energy Efficiency Plan would deliver energy conservation at much too high a customer cost per kilowatt hour saved. (Tr. Vol. 2, p. 761 & 783).

The Settlement Agreement reached with the ORS, SCEUC, and Wal-Mart protects customers from paying too high a cost. First, the Settlement Agreement provides for the return of over-collected DSM funds to customers as an offset to Rider EE (SC). As a result, if the DSM Balance is used to offset Rider EE (SC), the Company projects that residential customers will not experience any rate increase for at least two years. Second, the Settlement Agreement provides for a two year review period of the save-a-watt model. Two years after the Commission's approval of the Company's Energy Efficiency Plan, ORS will conduct a full review and evaluation of the program and will make recommendations regarding any changes to the save-a-watt program that ORS deems to be in the public interest. *See* Hearing Exhibit 2, Settlement Agreement, p. 6. In addition, Duke Energy Carolinas also will report (1) revenues earned, and (2) expenses calculated at 85% of the avoided generation costs as calculated in Rider EE (SC) in its Quarterly Reports. Actual program costs will be included in a footnote. These reports provide transparency to the Company's earnings and expenses, and create sufficient oversight of the program. *See* Hearing Exhibit 2, Settlement Agreement, ¶ 9.

The Energy Efficiency Plan's cost to customers is also fair. Rider EE (SC) will have a very modest impact on the rates of Duke Energy Carolinas' South Carolina



customers even after the existing DSM Balance is eliminated. (Tr. Vol. 2, p. 539).<sup>7</sup> The Company's original proposal included a provision whereby base rates for all customers would be reduced to eliminate the DSM charge of \$0.000811/kWh currently included in the rates. The Settlement Agreement provides for the flow-through of the accumulated DSM deferral balance to Residential, General Service, and Lighting customers, which will be used to offset, in its entirety, amounts recoverable under Rider EE (SC), net of the base rate credit, until the accumulated DSM deferral balance allocated to Residential, General Service, and Lighting customers has been completely returned. The flow-through of the accumulated DSM deferral balance to Industrial customers will be used to offset amounts recoverable under Rider EE (SC) without regard to the base rate credit of \$0.000811/kWh. The Company proposes that the accumulated DSM deferral balance be flowed through to customers through a newly created rate decrement adjustment mechanism as reflected in the table below, which shows the net charge to customers after all credits.

| <b>CUSTOMER<br/>CLASS</b> | <b>PER KWH</b>  |  |  |  |
|---------------------------|---|--|--|--|
|                           | <b>ANNUAL<br/>RIDER EE (SC)<br/>CHARGE<br/>AS PROPOSED<br/>BY THE<br/>COMPANY</b> | <b>BASE RATE<br/>CREDIT DUE<br/>TO<br/>ELIMINATION<br/>OF THE DSM<br/>CHARGE<br/>CURRENTLY<br/>INCLUDED IN<br/>RATES</b> | <b>FLOW-<br/>THROUGH OF<br/>ACCUMULATED<br/>DEFERRED DSM<br/>COSTS</b> | <b>NET<br/>CUSTOMER<br/>CHARGE<br/>AFTER<br/>CREDITS</b> |
| Residential               | \$0.001586  | \$(0.000811)   | \$(0.000775)   | \$0.000000   |
| Commercial                | \$0.000984  | \$(0.000811)   | \$(0.000173)   | \$0.000000   |
| Industrial                | \$0.000665  | \$(0.000811)   | \$(0.000665)   | \$(0.000811)   |

(Tr. Vol. 2, p. 548-549).

<sup>7</sup> Duke Energy Carolinas' Witness Farmer testified on re-direct examination that once the DSM balance has declined to zero, the expected incremental rate impact on a residential customer with 1000 kWh monthly usage is \$2.00 per month. (Tr. Vol. 2, p. 607-608).

Because the save-a-watt approach places the risk of non-performance on the Company, the Company's ability to retain the revenues generated by the rider is dependent upon its producing verified and measured energy savings. In other words, Duke Energy Carolinas's compensation is conditioned upon the Company providing value to its customers. Further, whether the revenues actually retained generate earnings is dependent upon the Company adequately controlling its costs and attracting participation in its energy efficiency programs. Accordingly, the "excessive cost/excessive return" criticism of the Company's Energy Efficiency Plan is simply without foundation.

Duke Energy Carolinas' Energy Efficiency Plan offers a sustainable regulatory model that provides (i) a win for the Company's customers by encouraging the pursuit of all cost-effective energy efficiency at a cost to customers that is lower than supply-side alternatives, (ii) a win for the Company's investors, by giving them an opportunity to earn comparable earnings and achieve comparable growth in earnings as they would see with supply-side investments, and (iii) a win for the environment by making "zero emissions" energy efficiency a more prominent component of Duke Energy Carolinas' resource portfolio. (Tr. Vol. 1, p.194-195).

2. Energy efficiency achievements.

With respect to efficiency achievements, the critics are saying essentially that they do not trust Duke Energy Carolinas to deliver its best effort. This criticism is puzzling and simply unfair. The Company has made specific commitments regarding energy efficiency, both in terms of spending commitments and in terms of results. Duke Energy Carolinas fully intends to keep its commitments and should be afforded the opportunity

to start implementing its proposed portfolio of programs and introduce additional programs based upon the experience it gains in the market.

Environmental Intervenors Witness Gilligan contended that Duke Energy Carolinas had not disclosed all of the data in a form that facilitates public discussion and acceptance of the proposed program. Public acceptance of the costs, benefits, and profitability of an energy efficiency program are critical to a program's long-term sustainability. (Tr. Vol. 1, p. 442-443). Mr. Gilligan specifically complained that detail of cost/benefit analysis of potential program measures including the avoided costs used had not been provided. (Tr. Vol. 1, p. 433).

The record shows that Mr. Gilligan's contentions are erroneous. Duke Energy Carolinas Witnesses Theodore Schultz and Dr. Richard Stevie outlined the extensive information provided to the Environmental Intervenors in response to very detailed data requests. Mr. Schultz explained why the avoided cost calculations used in modeling were confidential. These values remain confidential because the Company is frequently in the market for wholesale purchased power opportunities to serve retail customers. (Tr. Vol. 1, p. 274-275 & 387-388). In addition, information on the proposed programs also was made public in the Duke Energy Carolinas Annual Plan filed with the Commission on November 15, 2007. (Tr. Vol. 1, p. 387-388).

The process used to develop the portfolio of energy efficiency programs has been transparent and open, and it included substantial input from Duke Energy Carolinas' customers. (Tr. Vol. 1, p. 274). The Company formed the South Carolina Energy Efficiency Collaborative Group (the "Collaborative"), which included a diverse group of customers, state agencies, environmental groups, and other stakeholders. The proposed

portfolio includes many of the programs recommended to the Company by stakeholders during the collaborative process that led to the filing of the Energy Efficiency Plan.

Duke Energy Carolinas employed a three-step process to determine the programs to be included in the proposal. First, it compiled a list of energy efficiency programs already offered and tested by Duke Energy Carolinas and its affiliates. Second, the Company solicited new program ideas from the Collaborative and solicited direct input from its South Carolina customers through primary research. Third, the Company refined these program ideas and applied multiple cost-effective analyses to evaluate all current or proposed programs. Programs deemed cost-effective were incorporated into a master list of program ideas, reviewed and agreed to by the Collaborative, and finally, consolidated into the list of energy efficiency programs included in the portfolio. The annual review process also will afford an opportunity for parties to review the portfolio and to suggest additions or revisions to the program. (Tr. Vol. 1, p. 254-255 & 274-275).

The Environmental Intervenors also object to the Company's inclusion of demand response (or load management) programs in its save-a-watt compensation model. Environmental Intervenors Witness Nichols testified that load management is "an obligation of the utility, not a special super-profit center." (Tr. Vol. 2, p. 766). The Environmental Intervenors' position (i) fails to recognize the value demand response programs provide to all customers, and (ii) exaggerates, without substantiation, the earnings impact on the Company. Customers are looking for solutions that avoid or delay new generation, and thereby achieve long-term sustainable efficiency gains. The July 2006 *National Action Plan for Energy Efficiency* defines energy efficiency as less energy use at any time, including times of demand through demand response and peak

shaving efforts. In order to obtain higher levels of participation, the Company believes it must look at energy efficiency from a customer's perspective. (Tr. Vol. 1, p. 267, & 284-285). Numerous state commissions, including the Public Utilities Commission of Ohio, the Kentucky Public Service Commission, and this Commission, have adopted the customer's view and approved incentives for load management programs. (Tr. Vol. 1, p. 267-268).

The criticism of the Company's Energy Efficiency Plan's potential to produce energy efficiency results similarly is unfounded. The Environmental Intervenors, while accusing Duke Energy Carolinas of not pursuing energy efficiency with sufficient vigor, have worked to delay the Company's ability to implement energy efficiency programs out of fear that the save-a-watt regulatory model will not succeed.<sup>8</sup> This is short-sighted and counterproductive. Certainly, the Environmental Intervenors would be even more critical of the Company were it to ignore energy efficiency and energy conservation altogether. The fact is that Duke Energy Carolinas' Energy Efficiency Plan represents a robust set of energy efficiency programs designed to deliver annual energy savings of 0.25% of annual sales. This target is well within the range of 0.15 to 1 percent of energy sales cited in the July 2006 *National Action Plan for Energy Efficiency* as being achieved by well-designed energy conservation programs across the country. In a state with a modest average rate of 6.89 cents per kWh, the Company's energy savings targets are ambitious. Unlike states with higher rates, South Carolina customers simply have not had much financial incentive to conserve. As Company Witness Schultz testified, even

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<sup>8</sup> It was not until nearly ten months after the hearing and the Company's most recent letter asking the Commission to close the record and set a date for submission of briefs and proposed orders that the Environmental Intervenors expressed any support for allowing Duke Energy Carolinas to move forward with its energy efficiency programs.

in a state like New York, which has an average rate of 15.27 cents per kWh, New York has only been able to achieve energy conservation results of 0.2% of sales. (Tr. Vol. 1, p. 272-273). The experience of New York only serves to validate the reasonableness of the energy savings targets contained in Duke Energy Carolinas' Energy Efficiency Plan.

The Environmental Intervenors also appear to simply "wish away" the Company's need to increase generation capacity. This, too, is short-sighted and counterproductive. The Company's resource needs are growing, and the Environmental Intervenors have no credible solution to offer to replace capacity needs with anything other than capacity additions. Moreover, Duke Energy Carolinas' Energy Efficiency Plan is a start-up program. The effectiveness of the save-a-watt compensation mechanism cannot be judged in advance. Rather, the effectiveness of the Company's efforts will become apparent as the plan's results are demonstrated through the programs' robust measurement and verification processes. Finally, because the Company is paid only for results, it has every incentive to implement all cost-effective energy efficiency programs and to maximize those results, consistent with its twin obligations to be both a steward of its funds and a reliable provider of electric energy.

Ultimately, the Environmental Intervenors' criticism falls woefully short because they propose no alternative. That leaves their criticism hollow. Duke Energy Carolinas has made a commitment to three national energy efficiency advocacy groups<sup>9</sup> contingent upon, first, save-a-watt approval, and, second, the availability of sufficient cost-effective programs to support this target – to achieve through energy efficiency, savings of 1% of 2009 retail electricity sales by 2015, and to continue at that pace incrementally thereafter.

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<sup>9</sup> Alliance to Save Energy, the American Council for an Energy-Efficient Economy, and Energy Future Coalition Agreement with Duke Energy reached on February 4, 2008.

(Tr. Vol. 1, p. 287, 307-308 & Tr. Vol. 2, p. 667-668). Duke Energy Carolinas intends to keep this commitment. Rather than supporting the Company's efforts, however, Environmental Intervenors are seeking to derail those efforts. Further delay is not in the interest of consumers who can benefit from the value provided from the Company's energy efficiency programs. The Commission should refuse to allow energy efficiency to be derailed.

### **III. SETTLEMENT AGREEMENTS**

**A. Duke Energy Carolinas' settlement with the Office of Regulatory Staff, the South Carolina Energy Users' Committee, and Wal-Mart Stores is reasonable, in the public interest, and in accordance with regulatory policy.**

The Settlement Agreement was the result of extensive discussions between Duke Energy Carolinas, ORS, SCEUC, and Wal-Mart ("Duke-ORS Settling Parties") to resolve various issues. Because the proposed save-a-watt Energy Efficiency Plan is a novel approach to energy efficiency, the Settlement Agreement includes certain provisions designed to provide further review of the plan after it is in effect. These provisions serve as a safety valve while still allowing the Company the flexibility necessary to pursue vigorously its Energy Efficiency Plan, a plan that could postpone the necessity for a new plant and save customers 15% off the supply-side alternative. The Environmental Intervenors contend that the Settlement Agreement was not in the public interest as a whole and specifically address three provisions discussed below. The Settlement Agreement includes the following provisions:

**1. Opt-Out for Large Customers**

The Settlement Agreement contains a provision that allows large commercial and industrial customers whose maximum annual peak load demands exceed either (i) 3,500

kW for individual accounts, or (ii) 6,000 kW for the aggregated accounts of the customer and its affiliates, to opt out of the energy conservation portion of the Rider EE (SC). *See* Hearing Exhibit 2, Settlement Agreement ¶ 3. The customer must certify that it has performed an energy audit within the three year period preceding the opt-out request and has implemented or has plans to implement the cost-effective measures recommended in the audit. The opt-out applies to only the conservation portion of the Rider EE (SC), and it applies to the Company's entire portfolio of energy conservation programs. Once a customer participates in the conservation portion of the Rider, the customer cannot later chose to opt out of that portion for a period of five years or the life of the applicable measure, whichever is longer. If a customer terminates its participation in the conservation portion prior to this period, the customer must pay a termination charge. (Tr. Vol. 1, p. 139-140, 148-149, 547). *See also* Hearing Exhibit 2, Settlement Agreement, p. 2-4.

The Environmental Intervenors agree in principle that an opt-out provision for large customers may be appropriate. *See* Environmental Intervenors' Settlement Response ¶ 6. However, they contend that the Duke-ORS Settling Parties have not submitted sufficient evidence that the opt-out provision is in the public interest and suggest that a program that provides a performance-based rate discount incentive equal to the Rider EE (SC) would be a better alternative. *See* Environmental Intervenors' Settlement Response, ¶ 4-6. Their specific concern is related to the customer self-certification. *See* Environmental Intervenors' Settlement Response ¶ 5. Because the customers stand to achieve significant energy efficiency gains under the proposed programs, there is very little incentive for a customer to intentionally commit fraud in an



effort to opt-out. The fundamental advantage of the plan is that it motivates both customers and the utility to achieve all cost-effective energy efficiency.

Duke Energy Carolinas believes the opt-out thresholds and criteria contained in the Settlement Agreement are reasonable and in the public interest. Although the opt-out eligibility criteria in the Settlement Agreement provide commercial and industrial customers that have implemented self-directed energy efficiency programs the ability to opt out, these customers must first attest that they have completed an energy assessment in the past three years and are working to implement energy efficiency programs. The Company would note that the provisions of the Settlement Agreement are more stringent than the opt-out thresholds in effect in the Company's North Carolina retail jurisdiction. North Carolina Senate Bill 3 and the North Carolina Utilities Commission's Regulations allow all industrial customers regardless of size and all commercial customers that consume 1,000,000 kWh per year or more to opt out of utility-sponsored conservation and demand response programs upon a simple certification that they have done or have plans to do their own energy efficiency programs in accordance with stated quantifiable goals.<sup>10</sup> In addition to having a lower opt-out threshold for commercial customers, the North Carolina rules also impose no requirement that the customer complete a recent energy usage assessment. Thus, the Settlement Agreement represents an opt-out compromise that is not only narrowly tailored to achieve the objective intended -- that is, to recognize the self-directed energy conservation efforts of the Company's larger

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<sup>10</sup> Pursuant to N.C. Gen. Stat. 62-133.9(f) and North Carolina Utilities Commission ("NCUC") Rule R8-69(d), industrial accounts of any size and large commercial accounts that use more than 1 million kWh in the prior calendar year, may elect to opt out of participating in the demand-side management (DSM)/energy efficiency (EE) programs and avoid paying the charges if, at their own expense, they have implemented in the past or plan to implement in the future, alternative DSM/EE measures in accordance with stated, quantifiable goals. Commercial customers consuming less than 1 million kWh in the prior calendar year and residential customers are not eligible to opt out.

commercial and industrial customers – but is sufficiently vigorous to require that an energy audit be performed to serve as the basis for the customer’s self-directed activities.

## 2. Cost Allocation Methodology

The Settlement Agreement also alters the cost allocation methodology originally proposed by the Company to provide that costs associated with demand response programs will be allocated among all customer classes based on each classes’ contribution to the Company’s firm peak demand. *See* Hearing Exhibit 2, Settlement Agreement ¶ 4. For energy conservation programs, non-residential customers will pay for non-residential programs and residential customers will pay for residential programs. *See* Hearing Exhibit 2, Settlement Agreement p. 4.

The Settlement Agreement provides that the allocations among customer classes for demand response programs will be calculated in the same manner as those provided for in Section 58-27-865(A)(1) (variable environmental costs) under the Base Load Review Act. *Id.*

All variable environmental costs included in fuel costs shall be recovered from each class of customers as a separate environmental component of the overall fuel factor. The specific environmental component for each class of customers shall be determined by allocating such variable environmental costs among customer classes based on the utility’s South Carolina firm peak demand data from the prior year.

S.C. Code Ann. 58-27-865(A)(1) (Supp. 2007).

Consequently, the revenue requirements for all demand response programs were allocated to South Carolina retail customers based on the percentage of South Carolina retail energy sales to total retail energy sales. This same method is used for conservation programs. Once a South Carolina allocation of the demand response revenue requirements was calculated in this manner, the South Carolina-allocated portion of the

demand response revenue requirements was allocated to the customer classes on the basis of the applicable customer class' contribution to South Carolina firm peak demand from 2006. (Tr. Vol. 2, p. 546-547).

This demand response program allocation acknowledges the system wide benefits generated by participation in demand response programs by non-residential customers. (Tr. Vol. 1, p. 140-141). Demand response programs allow Duke Energy Carolinas to shed load at times of peak demand—usually driven in the summer by increases in residential demand. (Tr. Vol. 1, p. 141-142).

### 3. Demand Side Management Balance Return to Customers

Currently in South Carolina, Duke Energy Carolinas is required to defer the difference between the DSM amounts it collects from customers, which is approximately \$18 million each year, and what the Company spends to deliver DSM programs. This deferral requirement over time has resulted in an over collection of DSM amounts by Duke Energy Carolinas from customers of approximately \$87 million as of November 30, 2007.<sup>11</sup> The Duke-ORS Settling Parties agreed that (i) the current collection for DSM costs of \$0.000811/kWh will be replaced by the approved Rider EE (SC) amounts, and (ii) the DSM Balance, including accrued interest at the currently approved rate, will be calculated by customer class and those customer class balances will be returned to each customer class as described below until the DSM Balance is zero by class, or until the Company's next base rate case, whichever occurs first. *See* Hearing Exhibit 2, Settlement Agreement ¶ 5.

For Residential, General Service, and Lighting customers, the DSM Balance will

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<sup>11</sup> Since November 30, 2007, the DSM Balance liability has been growing at a rate of approximately \$5 million per quarter. (Tr. Vol. 2, p. 603).

be used to implement a rate decrement equal to the increment resulting from the difference between the current DSM collection in rates and the demand response and conservation factors comprising the annual Rider EE (SC) rate. For industrial customers the DSM Balance will be used to implement a rate decrement equal to the demand response and conservation factors comprising the annual Rider EE (SC) rate increment. In calculating the amount of the existing DSM Balance, which is credited to each class of customers, the Duke-ORS Settling Parties agreed that costs of delivering DSM programs prior to implementation of Rider EE (SC) should be assigned to the classes based on actual payments made to customers and all of the DSM Balance for each respective class would be returned to that respective class. *See* Hearing Exhibit 2, Settlement Agreement, p. 4-5. (Tr. Vol. 1, p. 142-143, 150-151 & Vol. 2, p. 547-549).

The Environmental Intervenors contend that the return of the DSM Balance should not be tied to the Company's Energy Efficiency Plan. *See* Environmental Intervenors' Settlement Response ¶ 7-8. The Environmental Intervenors mischaracterized the DSM Balance as resulting from "overcharges" to customers. The account was established pursuant to Commission directive to ensure that customers would be neither overcharged nor undercharged. Any difference between collections and expenditures are reflected in the deferral account for future return to customers with interest. Because the Application proposes to close the existing DSM programs and to remove the DSM factor from rates to implement the new plan, it is appropriate to address the DSM deferral account balance in this proceeding. (Tr. Vol. 1, p. 143). Company Witness Ellen Ruff specifically outlined the benefits of the proposed return of the DSM Balance in her testimony. (Tr. Vol. 1, p. 144). The Settlement Agreement provides an

opportunity to implement the Company's Energy Efficiency Plan, including its innovative save-a-watt compensation mechanism, without any rate increase to the residential customer prior to the two year review process.

4. Reduction of Percentage of Avoided Costs

As part of the compromise reached with the Duke-ORS Settling Parties, Duke Energy Carolinas agreed to reduce its proposal that the Company be compensated for investments in energy efficiency from 90% of avoided generation costs to 85%. *See* Hearing Exhibit 2, Settlement Agreement, ¶ 6, p. 5. (Tr. Vol. 1, p. 143-144, 151-152; Vol. 2, p. 548-549). The Environmental Intervenors contend that the five percent reduction does not mitigate their concern that the avoided cost compensation is not in the public interest. They argue that linking revenue to avoided costs is inherently unfair to customers because avoided costs are not a measure of value—they are a measure of supply price in a market where the end customers do not directly encounter that price. Environmental Intervenors' Settlement Response ¶ 9-10.

We disagree. Avoided costs are a direct measure of value to customers. The value to all customers—participants and non-participants—is the avoided cost of generation. In addition, the Company's revenues are tied to the results it achieves. Witness Ruff's testimony specifically supports that this provision of the settlement is in the public interest. The reduction of compensation to 85% of avoided generation costs will enable customers to pay 15% less than they would have been charged based on the incremental cost of avoided generation and capacity. (Tr. Vol. 1, p. 144). Because the Company is compensated on 85% of avoided generation costs, by definition a customer's bill is going to be lower than paying 100% of the cost of generation. In addition, the

Energy Efficiency Plan's focus is on being paid for results. If Duke Energy Carolinas does not deliver the value to customers and they do not participate, the Company does not get paid. (Tr. Vol. 1, p. 282 & 306-307).

5. Two Year Review of the Company's Energy Efficiency Plan

The Settlement Agreement also provides for a two year review of the Energy Efficiency Plan. On the second anniversary of the effective date of Rider EE (SC), ORS is to (i) conduct a full review and evaluation of the Company's Energy Efficiency Plan pursuant to its authority under South Carolina Code Annotated Section 58-4-50(A)(1) and (2); and (ii) make recommendations regarding any changes, corrections, or amendments to the save-a-watt program that ORS deems to be in the public interest, consistent with the S.C. Energy Efficiency Act. Duke Energy Carolinas may oppose changes proposed by ORS or seek revisions or amendments to the Energy Efficiency Plan. Any party may oppose the continuation of the plan or seek revisions or amendments to the plan. *See* Hearing Exhibit 2, Settlement Agreement, p. 6. Because the plan is a new, more complex approach to pursuing energy efficiency, this provision gives the Company an opportunity to make necessary improvements early in the implementation process to benefit customers. (Tr. Vol. 1, p. 144-145, 152). The two year provision is a safeguard against the "overcompensation" concerns expressed by the Environmental Intervenors. After the initial implementation period of two years, any Party may oppose continuing the plan or seek revisions or amendments.

6. Quarterly Reports

The Settlement Agreement provides that Duke Energy Carolinas will account for the impacts of the proposed save-a-watt regulatory treatment on energy efficiency

revenues in its Quarterly Reports as follows: the Company will include (a) revenues earned through Rider EE (SC), and (b) expenses calculated at 85% of the avoided generation costs as calculated in Rider EE (SC). *See* Hearing Exhibit 2, Settlement Agreement, ¶ 9. Actual program costs for the reporting period will be included for information purposes as a footnote in the Reports. Duke Energy Carolinas will not seek to recover program costs in addition to 85% of the avoided generation costs calculated in Rider EE (SC). *See* Hearing Exhibit 2, Settlement Agreement, p. 6-7. Duke Energy Carolinas' Witness Ruff testified that the purpose of this change was to make clear that the Company is not seeking to recover the higher of its program costs or 85% of the avoided generation costs. (Tr. Vol. 1, p. 146, 152-153) (See also Tr. Vol. 2, p. 617- 618). The quarterly reports and annual reviews will enable a review of revenues collected under the Rider, expenses calculated at 85% of the avoided generation costs, and the actual program costs. These reports provide transparency and oversight of the program that mitigate the risk of any overcompensation to the Company.

7. Response Time

Paragraph 10 of the Settlement Agreement provides ORS and other parties of record a period of one hundred and twenty (120) days to respond to the Company's proposed analysis report of the first evaluation period and for the amount of the Rider EE (SC) charge that will be in effect for the following year. *See* Hearing Exhibit 2, Settlement Agreement, p. 7, ¶ 10 (Tr. Vol. 1, p. 146-147).

8. Allocations between South Carolina and North Carolina

The Duke-ORS Settling Parties agreed that jurisdictional cost allocations for ratemaking purposes will take into account the capacity and energy savings by state and

the effects those savings have on actual generating plant costs, peak demand, and energy sales. Further, these effects will be incorporated into the allocation of production plant costs, such that South Carolina and North Carolina each receive appropriate credit for the results achieved and for the costs paid through Rider EE.

9. Compliance with Commission Policy

The Duke-ORS Settling Parties complied with the *Commission's Settlement Policies and Procedures revised 6/13/2006* by filing an explanatory brief and joint motion and testimony supporting the settlement. The Settlement Agreement is supported by substantial evidence in the record. Duke Energy Carolinas' Witnesses Ruff and Farmer provided extensive testimony in regard to the Settlement Agreement. Duke Energy Carolinas' witnesses answered questions about the settlement during the hearing. The Company also provided late-filed exhibits at the request of the Commission. The agreement provides sufficient oversight and monitoring of this new save-a-watt approach and supports the Company's overall commitment for increased energy efficiency. It also will enhance customer energy efficiency offerings in Duke Energy Carolinas' service territory. Therefore, the Settlement Agreement is in the public interest.

**B. Duke Energy Carolinas' settlement with the Office of Regulatory Staff and Piedmont Natural Gas is reasonable, in the public interest, and in accordance with regulatory policy.**

The Piedmont Settlement Agreement and Amended Piedmont Settlement Agreement were the result of extensive discussions between Duke Energy Carolinas, ORS, and Piedmont ("Duke-Piedmont Settling Parties") to resolve various issues. The Piedmont Settlement Agreement provided for the implementation of a discussion process between the Duke-Piedmont Settling Parties to determine if the issues raised by Piedmont



could be resolved amicably, in the public interest, and consistent with state and federal laws. The Amended Piedmont Settlement Agreement resolved the issues. The Amended Piedmont Settlement Agreement acknowledges that Duke Energy Carolinas' proposed energy efficiency programs are not intended to displace natural gas or to encourage fuel-switching. The agreement specifically clarified certain issues with the Smart Saver<sup>®</sup> Programs. Duke Energy Carolinas and Piedmont also agreed to work together to develop certain joint energy efficiency programs. The Environmental Intervenors filed no response or objection to the joint motion to approve the Amended Piedmont Settlement Agreement. The Amended Piedmont Settlement Agreement includes the following provisions:

1. Program Design and Intent

The Amended Piedmont Settlement Agreement clarifies that the intent and design of the energy efficiency programs included in Duke Energy Carolinas' Energy Efficiency Plan: (a) are not intended to displace or replace natural gas appliances with competing electric appliances; (b) are not designed to encourage fuel-switching; and (c) require demonstrated electric energy savings in each application utilizing cost-effectiveness testing. Amended Piedmont Settlement Agreement, ¶ 4.

2. Residential and Nonresidential Smart Saver<sup>®</sup>

With respect to its proposed Residential and Non-Residential Smart Saver<sup>®</sup> programs, the Amended Piedmont Settlement Agreement provides that: (a) the flexibility requested by the Company to shift funding among energy efficiency programs will be limited to reallocations among programs and their associated measures that have been filed and approved by the Commission; (b) incentives offered by Duke Energy Carolinas

will not exceed 50% of the installed cost difference between standard equipment and higher efficiency equipment for any program application, except for low income weatherization and residential lighting programs, or such other programs as may be ordered by the Commission at the request of parties other than Duke Energy Carolinas; and (c) Duke Energy Carolinas will promote on an equal basis and offer equivalent incentive payments for heat pumps and air conditioning. Amended Piedmont Settlement Agreement, ¶ 5.

3. Residential Smart Saver<sup>®</sup> Air Conditioners and Heat Pump Incentive Program

The Amended Piedmont Settlement Agreement clarifies the intention and design of the Residential Smart Saver<sup>®</sup> Air Conditioning Program. This program will provide incentives to customers, builders, and heating contractors to promote the use of high-efficiency air conditioners and heat pumps with electronically commutated fan motors (“ECM”). The program is designed to increase the efficiency of HVAC systems in new homes and for replacements in existing homes. Residences, condominiums, and mobile homes served by Duke Energy Carolinas would be eligible for both the air conditioner and heat pump components of this program. Amended Piedmont Settlement Agreement, ¶ 6.

Paragraph 7 provides that the description of the Smart Saver<sup>®</sup> program will specify that if a home is either currently heated by a natural gas furnace or if natural gas is available at a new home, then a heat pump incentive is available if a heat pump is installed with ECM as part of a dual-fuel system that uses natural gas as the supplemental heat source. The Commission has continuing oversight of the operation of this provision and Duke Energy Carolinas is to file an update report to the Commission specifying the

enrollment and effect of this measure as part of its annual energy efficiency rider proceedings. Amended Piedmont Settlement Agreement, ¶ 7.

4. Residential Smart Saver<sup>®</sup>

The next section provides that under its Residential Smart Saver<sup>®</sup> Program the Company will not offer incentives for appliances until: (a) ENERGY STAR<sup>®</sup> ratings or some other nationally recognized ratings are established for these applications; and (b) it has obtained appropriate Commission approval for these programs. Incentives will not include water heating systems. Amended Piedmont Settlement Agreement, ¶ 8.

5. Nonresidential Smart Saver<sup>®</sup>

Under the Non-Residential Smart Saver<sup>®</sup> program energy efficiency measures for prescriptive or custom incentives must prove cost effective under the Utility Cost Test (“UCT”). Cost-effectiveness will be measured based on the improvement in electric efficiency only. Custom incentives will apply only when there is an improvement in electric efficiency. In cases where electric equipment does not currently exist within a customer's facility, Duke Energy Carolinas will compare the proposed efficiency measure against the efficiency of the current code or standard electric equipment that would have been installed. Finally, custom incentive applications will not be originated by Duke Energy Carolinas; rather, custom incentives must originate with customers bringing new ideas to Duke Energy Carolinas for efficient electric applications after the customer has chosen the technology and fuel source. Amended Piedmont Settlement Agreement, ¶ 9.

In paragraph 10 of the Amended Piedmont Settlement Agreement, Duke Energy Carolinas must file the list of measures and incentive amounts associated with each measure it proposes to offer as part of its Non-Residential Smart Saver<sup>®</sup> Program. The

incentive amounts contained in the list will not be increased without a subsequent filing and approval by the Commission. Amended Piedmont Settlement Agreement, ¶ 10.

6. Joint Program Development

The next section provides that Duke Energy Carolinas and Piedmont will work together in good faith for the benefit of consumers to design and implement joint energy efficiency programs that promote high-efficiency improvements to (a) new home or building construction, (b) existing buildings or homes, (c) energy audits, and (d) home or building weatherization programs. All new programs jointly developed by Piedmont and the Company will be filed with the Commission for approval. Amended Piedmont Settlement Agreement, ¶ 11.

7. Continuing Review

Paragraph 12 of the Agreement provides that Piedmont does not object at this time to the programs and incentive levels set forth in the direct testimony of Company Witness Schultz. However, Piedmont reserves the right to assert objections to individual program filings made in this docket if Piedmont determines that any individual program filing (a) poses an unreasonable risk to free and fair competition between natural gas and electricity, or (b) promotes the inefficient consumption of energy. Amended Piedmont Settlement Agreement, ¶ 12.

8. Compliance with Commission Policy

The Duke-Piedmont Settling Parties complied with the *Commission's Settlement Policies and Procedures revised 6/13/2006* by filing an explanatory brief and joint motion. Duke Energy Carolinas Witness Schultz provided extensive testimony about the proposed programs during the February hearing. (Tr. Vol. 1, p. 255-258 & Hearing

Exhibit 4). Piedmont Witnesses Skain and Yoho testified about their concerns with the proposal. (Tr. Vol. 2, p. 964-968 & 975-981). Duke Energy Carolinas' Witnesses Schultz and Hager responded to Piedmont's concerns. (Tr. Vol. 1, p. 277-278 & Vol. 2, p. 654-659). No party objected to the Amended Piedmont Settlement Agreement.

The Amended Piedmont Settlement Agreement commits both the Company and Piedmont to ongoing collaborative efforts to promote energy efficiency in their joint service territories. Customers will benefit from increased program offerings through this coordinated effort. The agreement supports the Company's overall commitment to increased energy efficiency activity and will enhance customer energy efficiency offerings in both gas and electric territories.

#### **IV. COMMISSION QUESTIONS**

Duke Energy Carolinas provides the following information in response to the questions posed by the Commission in Order No. 2008-834 issued December 23, 2008:

***A. How will potential federal mandates for energy efficiency affect save-a-watt, as the new administration has said it intends to invest substantial sums of money in this area?***

Although it is unclear what the new Obama administration will do, the Company's save-a-watt approach to energy efficiency will place Duke Energy Carolinas in the best position to obtain maximum energy savings. There are several ways that the new administration could choose to address energy efficiency, including (i) proposing requirements that each state achieve a certain level of energy efficiency, (ii) offering financial incentives for states achieving energy efficiency or penalties for states that do not, (iii) creating new energy efficiency standards for buildings and equipment, and (iv) requiring energy education programs.

If new standards for equipment efficiency are enacted, the Company's Energy Efficiency Plan, as with any other energy efficiency program that includes giving customers incentives to buy equipment that is more energy efficient than what they would otherwise purchase, could be adversely affected. For example, when the new lighting efficiency standards become effective, customers effectively will be required to purchase compact fluorescent light bulbs ("CFLs") instead of incandescent bulbs. As a result, it will no longer be cost-effective for the Company to offer incentives to customers to purchase CFLs. As new standards for equipment efficiency are established, these standards can eliminate technologies from the Company's energy efficiency portfolio because consumers will have no alternative to these technologies. Therefore, as with the CFL example, there would be fewer cost-effective technologies for the utility to pursue. Only as new, more efficient equipment becomes available would the utility be able to offer incentives to customers to be more efficient under its Energy Efficiency Plan. The Company's projected savings reflect the anticipated impact of the new lighting standards and will be adjusted for any new equipment efficiency standards enacted. Under the measurement and verification process included in the save-a-watt model customers are protected from paying for energy efficiency programs that are no longer responsible for driving savings.

Instead of new standards, if the government offers incentives to consumers to purchase and install more efficient equipment, the utility can help customers leverage those incentives to achieve greater levels of energy efficiency, provided it remains cost-effective to do so. Under either scenario, implementation of a results-based model like save-a-watt would provide protection for the consumer because Duke Energy Carolinas

only will be compensated for energy savings its programs produce. This is where the Company's save-a-watt pay-for-performance model is superior to other incentive models that base compensation on the utility's program spending. Because Duke Energy Carolinas will be paid only for results achieved, the Company must continually find new ways to provide value to its customers. As federal energy efficiency mandates or tax or other financial incentives for more energy efficient products are enacted, the Company must look for new ways to deliver energy and capacity savings. Unlike other approaches, the save-a-watt model provides the financial encouragement necessary for the Company to make significant investments in energy efficiency programs that can go beyond these federal initiatives.

**B. Is it appropriate for Duke Energy Carolinas to base the Company's compensation under save-a-watt on a PURPA avoided cost rate? Is this method of compensation required by state law?**

It is appropriate for Duke Energy Carolinas to base the Company's compensation under the save-a-watt approach on its avoided costs. First, the level of avoided costs will be determined consistent with the approved method already used by the Commission in its most recent proceedings setting avoided costs for the Company. *See IN RE: Proceeding for Approval of PURPA Avoided Cost Rates for Electric Companies*, Docket No. 95-1192-E, Order Approving Revised Schedule PP (SC), Order No. 2007-591 (August 23, 2007), and Order Ruling on Petitions, Order No. 96-570 (August 28, 1996). It is both practical and reasonable to price capacity and energy savings on avoided cost rates set in accordance with PURPA. This methodology is subject to Commission review and approval. The rates are "formula rates" that are based on accepted ratemaking principles that date back to the enactment of PURPA in 1978. Inherent in the calculation

of the rate is the concept of paying for “value received,” which is measured based on the utility’s avoided costs. Although the use of avoided costs as the basis for determining the utility’s compensation is not required by state law, the Company believes it is permitted, and indeed best, to value saving watts (*i.e.*, energy efficiency) in a manner equivalent to the value of adding watts (*i.e.*, paying Qualifying Facilities). (Tr. Vol. 2, p. 526).

Secondly, the concept of providing an incentive to utilities for implementation of energy efficiency programs based upon a percentage of the savings (avoided costs) is the same in principle as a shared savings approach used in many jurisdictions across the country, including both South Carolina and North Carolina. The Commission allowed Duke Energy Carolinas to accrue shareholder incentives for load management in Order No. 91-1022. Pursuant to this Order, Duke Energy Carolinas booked rewards for DSM and energy efficiency programs, including load management programs in 1992, 1993, and 1994. These rewards were included in the Company’s DSM Deferral Account for future recovery. The North Carolina Utilities Commission also authorized an identical measure for Duke Energy Carolinas. (Tr. Vol. 2, p. 659 & 662).

Like the save-a-watt model, the shared savings approach is also an avoided cost based mechanism. Under the shared savings approach, the utility recovers its program costs, lost margins, and a performance incentive comprised of a percentage of the avoided costs minus program costs.<sup>12</sup> Thus, the save-a-watt and shared savings financial incentive mechanisms are very similar. The save-a-watt approach, which is a value-of-service compensation model, represents a natural evolution of the shared savings model,

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<sup>12</sup> States that currently employ shared savings financial incentive models for energy efficiency include Oklahoma, which has approved program cost recovery, lost margins and a 25% shared savings financial incentive for Oklahoma Gas and Electric Company in Case No. 200800059 by the Oklahoma Corporation Commission in Order No. 556179 (July 2, 2008).



which is a hybrid of cost-of-service and value-of-service regulation.<sup>13</sup> The major difference is that under the save-a-watt approach, customers face less risk because the utility bears the risk of recovering its program costs from the percentages of avoided costs; while under the shared savings method, the utility recovers the program costs directly. With the save-a-watt approach, the utility only gets paid for the energy efficiency results it delivers, *i.e.*, the energy efficiency impacts (kWh and kW) realized by customers as verified by an independent party. Customers only pay for energy efficiency resources that are delivered.

Duke Energy Carolinas believes an avoided cost-based value-of-service model is a more appropriate energy-efficiency recovery mechanism than more traditional cost-plus models because energy efficiency activities are not asset-driven services like building and operating generating facilities; rather, energy efficiency is more akin to service-based business functions (*e.g.*, helping customers control energy costs while minimizing impacts to their comfort or convenience). As a result, a value-of-service model that focuses on the results delivered to customers is more appropriate for determining the value, revenues, and returns obtained from energy efficiency than the traditional asset-focused, cost-of-service approach that regulates a utility's return on and of its investment in plant.

The Company also would point out that its save-a-watt avoided cost-based incentive mechanism is consistent with resolutions adopted by the National Association

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<sup>13</sup> This evolution from shared savings to a purely avoided cost-based save-a-watt compensation model was recently completed in Ohio with the Public Utilities Commission of Ohio's ("PUCO") decision in Duke Energy Ohio, Inc.'s Application for Approval of an Electric Security Plan, Case No. 08-920-EL-SSO (December 17, 2008). The PUCO decision in that case approved a broad-based settlement reached among most of the parties, which included the Ohio Office of Consumer Counselor and two national environmental groups, the Natural Resources Defense Council and the Sierra Club.

of Regulatory Utility Commissioners (“NARUC”). On August 2, 2006, NARUC adopted a resolution supporting the *National Action Plan on Energy Efficiency*.<sup>14</sup> On July 23, 2008, NARUC adopted a resolution encouraging state utility commissions to consider the recommendations of the Second Joint Statement of the American Gas Association and the Natural Resources Defense Council.<sup>15</sup> These policy resolutions recognize the need (i) to remove disincentives to utilities to pursue energy efficiency, and (ii) to expand the use of financial incentives for energy efficiency so that energy efficiency programs will be more widely promoted by utilities. The save-a-watt financial incentive model places energy efficiency on a level playing field with supply-side alternatives, thereby removing the financial disincentive inherent in cost-plus regulation. The use of avoided cost pricing allows the value of watts saved to be placed on par with the value of watts generated. (Tr. Vol. 2, p. 524-525). Finally, the pay-for-performance aspect of the save-a-watt approach ensures that the Company has the proper incentive to innovate and deliver energy efficiency programs that yield results. (Tr. Vol. 1, p. 186). This, in turn, creates value for customers. Duke Energy Carolinas believes its save-a-watt plan is the only financial incentive mechanism that can truly accomplish both goals set out by NARUC in its July 23, 2008 resolution.

**C. Please comment or elaborate on the suggestions contained in the SELC’s filing of December 9, 2008.**

The Environmental Intervenors suggest that the Commission approve the Company’s energy efficiency programs on an interim basis with incurred costs placed

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<sup>14</sup> Resolution Supporting the National Action Plan on Energy Efficiency, NARUC (August 2, 2006). See [http://www.naruc.org/Resolutions/EC-2\\_NationalActionPlan0706.pdf](http://www.naruc.org/Resolutions/EC-2_NationalActionPlan0706.pdf).

<sup>15</sup> Resolution on Second Joint Statement of the American Gas Association and the Natural Resources Defense Council in Support of Measures to Promote Increased Energy Efficiency and Reduction in Greenhouse Gas Emissions, NARUC (July 23, 2008). See <http://www.naruc.org/Resolutions/GS%20Second%20Joint%20Statement.pdf> for full text.

into a deferred account for later true-up once an appropriate compensation mechanism is approved. The Company has had experience in the past with deferral of program costs and incentives. This approach can have negative consequences for both consumers and the utility. If the costs are allowed to accumulate, this creates a regulatory asset that can grow quite large and result in a large rate increase when it comes time to allow recovery. In addition, as the size of the deferred balance grows, it raises the risk to the utility on recovery. Contemporaneous recovery represents a better approach and aligns recovery better with the benefits provided to consumers.

Earlier in this brief, Duke Energy Carolinas addressed in detail the Environmental Intervenors' suggestion that more programs should be added. The Company has made specific commitments regarding energy efficiency in terms of spending and in terms of results. The process used to develop the portfolio of energy efficiency programs included substantial input from Duke Energy Carolinas' customers. The annual review process will afford an opportunity for parties to review the portfolio and to suggest additions or revisions to the program. (Tr. Vol. 1, p. 254-255 & 274-275). Duke Energy Carolinas has made a commitment – contingent upon, first, approval of the Company's save-a-watt compensation model, and, second, the availability of sufficient cost-effective programs to support this target – to achieve through energy efficiency, savings of 1% of 2009 retail electricity sales by 2015, and to continue at that pace incrementally thereafter. (Tr. Vol. 1, p. 307-308). The Company should be given the opportunity to begin implementing its proposed portfolio of programs and allowed to introduce additional programs based upon its experience in the market.

## **V. CONCLUSION**

Company Witness Rogers, the Chairman and CEO of Duke Energy Corporation, testified that the save-a-watt model is a win for its customers because it encourages the pursuit of all cost-effective energy efficiency at a cost that is lower than supply-side alternatives; it represents a win for the Company's investors because the Company will be afforded the opportunity to earn comparable earnings as it would with a supply-side investment; and it is a win for the environment because it makes energy efficiency, a zero emissions resource, a prominent component of the Company's resource portfolio. (Tr. Vol. 1, p. 351). The save-a-watt approach has the potential to become a national model to incentivize utilities to expand energy efficiency aggressively in both traditionally regulated and restructured markets. (Tr. Vol. 2, p. 895).

Because energy efficiency is a service, not a product, it has no rate base upon which to apply cost recovery and return. Therefore, a new earnings paradigm, based upon value created for the customer by this investment in energy efficiency on the customer's behalf, is necessary. The save-a-watt model provides this new paradigm. It is squarely allowed by S.C. Code Ann. § 58-37-20, and it should be adopted by this Commission. The policy of this State is to encourage and support utility-led efforts to achieve real energy efficiency.

The Environmental Intervenors have opposed Duke Energy Carolinas' efforts to meet customers' energy needs. They oppose the addition of an advanced clean-coal unit at Cliffside Steam Station. They oppose the development and construction of a new nuclear plant. They intervened in the 2005 Integrated Resource Plan case in North Carolina to argue that the Company was not aggressively pursuing enough energy

efficiency. (Tr. Vol. 2, p. 825-827). They now come before this Commission to oppose the Company's Energy Efficiency Plan in South Carolina. Duke Energy Carolinas respectfully submits that there is no course of action the Company could take to reliably meet its customers' energy needs that the Environmental Intervenors would endorse.

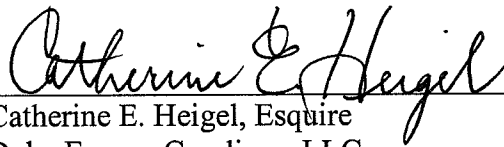
It is very important to note that by approving the Company's Energy Efficiency Plan, the Commission would be adopting a flexible model capable of being modified. The proposed review process protects ratepayers and addresses the Environmental Intervenors' concerns that the Company's earnings will be excessive. The review process allows the Commission to determine actual results based on actual data filed with this Commission. At the end of the two year review period, the Commission will then be free to take appropriate action – but that action will be based upon actual, hard data, not speculation.

The save-a-watt model provides the best option for the vigorous and sustained pursuit of energy efficiency savings. It appropriately aligns risk and reward. It provides flexibility and adequate financial incentive. Duke Energy Carolinas firmly believes the energy efficiency savings generated by its Energy Efficiency Plan can indeed create a reliable "fifth fuel" – a fuel entirely emission-free and environmentally-friendly, generated at a cost below (by definition) the cost of comparable supply-side generation. The Company's Energy Efficiency Plan (i) fulfills the S.C. Energy Efficiency Act mandate; (ii) supports NARUC's *Second Joint Resolution of the American Gas Association and the Natural Resources Defense Council in Support of Measures to Promote Increased Energy Efficiency and Reduction in Greenhouse Gas Emissions*; and (iii) prepares the Company and its customers for the policies and legislation of the in-

coming Obama Administration. Consequently, the Energy Efficiency Plan, as modified by the Settlement Agreements, is therefore squarely in the public interest and should be approved by the Commission and implemented by the Company.

Dated this 15<sup>th</sup> day of January, 2009.

Attorneys for Duke Energy Carolinas, LLC

A handwritten signature in black ink, reading "Catherine E. Heigel", written over a horizontal line.

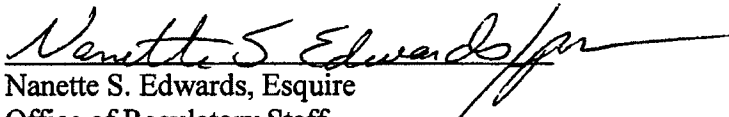
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The South Carolina Office of Regulatory Staff concurs with the position set forth in the attached brief of Duke Energy Carolinas, LLC ("Duke") and supports the approval and implementation of the Duke Energy Efficiency Plan as modified by the Settlement Agreement.

**South Carolina Office of Regulatory Staff**

A handwritten signature in cursive script, appearing to read "Nanette S. Edwards", followed by a long horizontal flourish.

Nanette S. Edwards, Esquire

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**BEFORE**  
**THE PUBLIC SERVICE COMMISSION OF**  
**SOUTH CAROLINA**  
**DOCKET NO. 2007-358-E**

|   |   |                               |
|---|---|-------------------------------|
| In re:                                    | ) |                               |
| Application of Duke Energy Carolinas, LLC | ) |                               |
| For Approval of Energy Efficiency Plan    | ) | <b>CERTIFICATE OF SERVICE</b> |
| Including an Energy Efficiency Rider and  | ) |                               |
| Portfolio of Energy Efficiency Programs   | ) |                               |
|   | ) |                               |

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This is to certify that I have placed a copy of the foregoing Brief of Duke Energy Carolinas with Concurrence of ORS in Support of Application for Approval of Energy Efficiency Plan and Approval of Settlements in the United States mail, postage prepaid, to the persons listed below on this 15<sup>th</sup> day of January, 2009.

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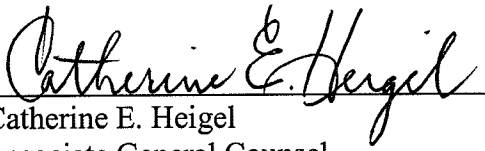


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This the 15<sup>th</sup> day of January, 2009.

  
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